Irritrol 217B

Irritrol 217B Globe/Angle Valve NPT with Flow Control, 2-inch Instruction Manual

Brand: Irritrol | **Model:** 217B

1. Product Overview

The Irritrol 217B Globe/Angle Valve is designed for reliable performance in irrigation and fluid control systems. This valve series is known for its robust construction and essential features, providing efficient flow management. It incorporates manual internal and external bleed capabilities, heavy-duty PVC construction resistant to UV, stainless steel components, a double-beaded diaphragm, and a captive solenoid plunger for consistent operation.

Figure 1: Irritrol 217B Globe/Angle Valve. This image shows the valve's main body, inlet/outlet connections, and the flow control mechanism.

2. Key Features

- **Durable Construction:** Heavy-duty, corrosion- and UV-resistant PVC construction with stainless steel spring and hardware ensures consistent and long-lasting operation.
- **Water Hammer Reduction:** Slow-closing design minimizes water hammer, reducing stress on the irrigation system.
- **Leak-Proof Seal:** Features a rugged, double-beaded SANTOPRENE diaphragm for a reliable, leak-proof seal.

- **Manual Operation:** Includes internal and external bleed (flush mode) for convenient manual operation and system flushing.
- **Pressure Regulation Compatibility:** Designed to accept an OmniReg modular pressure regulator, allowing for consistent performance and pressure management.

3. Installation and Setup

Proper installation is crucial for the optimal performance and longevity of your Irritrol 217B valve. Follow these general guidelines:

1. **System Preparation:** Ensure the water supply is turned off before beginning installation. Flush the main line to remove any debris that could interfere with valve operation.
2. **Flow Direction:** Identify the flow direction arrow on the valve body. Install the valve so that water flows in the indicated direction.
3. **Connection:** The valve features 2-inch NPT (National Pipe Tapered) connections. Apply appropriate thread sealant (e.g., PTFE tape or pipe dope) to the male pipe threads before connecting the valve. Hand-tighten, then use a wrench for an additional 1 to 2 turns. Do not overtighten.
4. **Wiring (if applicable):** If connecting to an irrigation controller, ensure proper wiring of the solenoid. Typically, one wire connects to the common wire of the controller, and the other to the zone wire. Refer to your controller's manual for specific wiring instructions.
5. **Post-Installation Check:** Slowly turn on the water supply and inspect all connections for leaks.

4. Operating Instructions

The Irritrol 217B valve offers both automatic and manual control options:

- **Automatic Operation:** When connected to an irrigation controller, the valve will open and close according to the programmed schedule.
- **Manual Internal Bleed:** To manually open the valve, turn the solenoid counter-clockwise approximately one-half turn. This allows water to bypass the diaphragm, opening the valve. To close, tighten the solenoid clockwise.
- **Manual External Bleed (Flush Mode):** To flush the valve or manually open it without removing the solenoid, locate the bleed screw or lever (if present) on the valve body. Opening this will release water externally and open the valve. Close it to return to automatic operation.
- **Flow Control Adjustment:** The valve is equipped with a flow control knob. Turning this knob clockwise will reduce the flow rate through the valve, while turning it counter-clockwise will increase the flow rate. Adjust as needed to optimize water distribution for your specific zone. Do not overtighten the flow control knob.

5. Maintenance

Regular maintenance helps ensure the longevity and reliable operation of your valve:

- **Periodic Inspection:** Periodically inspect the valve for any signs of leaks, cracks, or damage to the PVC body or connections.
- **Debris Removal:** If the valve is operating erratically, turn off the water supply and carefully disassemble the top of the valve to check for debris (e.g., dirt, sand, small stones) obstructing the diaphragm or solenoid plunger. Clean components with clear water.
- **Diaphragm Check:** Inspect the SANTOPRENE diaphragm for tears, punctures, or hardening. Replace if necessary.

- **Solenoid Check:** Ensure the solenoid plunger moves freely. Clean any mineral deposits if present.
- **Winterization:** In freezing climates, ensure the irrigation system, including valves, is properly winterized to prevent damage from freezing water. This typically involves draining the system or using compressed air to blow out water.

6. Troubleshooting

Refer to the following common issues and solutions:

- **Valve Does Not Open:**
  - Check if the water supply is on.
  - Verify the irrigation controller is sending power to the solenoid.
  - Ensure the solenoid is tightened properly.
  - Perform a manual bleed to check if the valve opens. If it does, the issue might be electrical or with the solenoid.
  - Inspect for debris obstructing the diaphragm or solenoid plunger.
- **Valve Does Not Close (Constant Flow):**
  - Check if the solenoid is fully tightened.
  - Inspect the diaphragm for tears, debris, or improper seating.
  - Ensure the flow control knob is not set too high or damaged.
  - Verify the controller is not continuously sending power to the solenoid.
- **Leaks from Valve Body or Connections:**
  - Tighten pipe connections, ensuring proper thread sealant was used during installation.
  - Check the valve bonnet screws for proper tightness.
  - Inspect the diaphragm for damage or improper seating.
  - Examine the valve body for cracks (replace valve if cracked).

7. Specifications

Attribute	Detail
Brand	Irritrol
Model Number	217B
Material	PVC, Stainless Steel
Inlet Connection Size	2 Inches
Inlet Connection Type	National Pipe Tapered (NPT)
Outlet Connection Size	2 Inches
Outlet Connection Type	National Pipe Tapered (NPT)
Number of Ports	2
Product Dimensions (L x W x H)	8.75 x 6.25 x 5.25 inches

Attribute	Detail
Item Weight	3 pounds
UPC	090258041207

8. Warranty and Support

For warranty information or technical support regarding your Irritrol 217B Globe/Angle Valve, please contact Irritrol customer service or visit their official website. Keep your purchase receipt as proof of purchase for any warranty claims.

Note: Specific warranty terms and conditions may vary by region and retailer.

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